

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A magneto optic device, comprising:
a semiconductor laser which emits a laser beam from a laser beam output surface; and
a thin film magnetic transducer stacked on the semiconductor laser, the thin film magnetic transducer comprising a magnetic circuit having at least a pair of magnetic poles opposed to each other via a magnetic gap, wherein the magnetic gap is formed in a laser beam output position in the laser beam output surface, the magnetic gap having a length smaller than a spot diameter of the laser beam in the laser beam output surface.
2. (Previously Presented) A magneto optic device according to claim 1, wherein the thin film magnetic transducer comprises a coil wound around a core as an element of the magnetic circuit.
3. (Canceled)
4. (Canceled)
5. (Previously Presented) A magneto optic device according to claim 1, wherein the thin film magnetic transducer has plural magnetic gaps in the laser beam output surface.
6. (Original) A magneto optic device according to claim 2, wherein the coil is wound around the core in a cylindrical shape.
7. (Original) A magneto optic device according to claim 2, wherein the coil is wound around the core in a disk shape.
8. (Previously Presented) A magneto optic device , comprising:
an edge emitting semiconductor laser that emits a laser beam from a laser beam output surface; and

a thin film magnetic transducer stacked on the semiconductor laser,
comprising:

a magnetic circuit having a magnetic gap, and

a coil wound around a core as an element of the magnetic circuit,

wherein:

the magnetic gap is formed in the laser beam output surface of
the edge emitting semiconductor laser; and

the coil is formed on an anode of the edge emitting
semiconductor laser.

9. (Previously Presented) A magneto optic device according to claim 2, wherein:
the semiconductor laser is an edge emitting semiconductor laser, and
the magnetic gap and the coil are formed in the laser beam output surface of
the edge emitting semiconductor laser.

10. (Previously Presented) A magneto optic device according to claim 2, wherein:
the semiconductor laser is a vertical cavity surface emitting semiconductor
laser, and
the magnetic gap and the coil are formed in the laser beam output surface of
the vertical cavity surface emitting semiconductor laser.

11. (Original) A magneto optic device according to claim 1, wherein the thin film
magnetic transducer has a coil formed in the laser beam output surface along an optical axis
as a center.

12. (Original) A magneto optic device according to claim 11, wherein the thin
film magnetic transducer has a shading body which is disposed on the inside of the coil and
has an opening smaller than the spot diameter of the laser beam on the laser beam output
surface in a laser beam output position of the laser beam output surface.

13. (Original) A magneto optic device according to claim 12, wherein the shading body is made of a material having a high magnetic permeability.

14. (Previously Presented) A magneto optic device according to claim 12, wherein:

the semiconductor laser is a vertical cavity surface emitting semiconductor laser, and

the shading body also serves as an electrode provided on the laser beam output surface side of the vertical cavity surface emitting semiconductor laser.

15-55. (Canceled)

56. (Previously Presented) The magneto optic device of claim 1, further comprising a shading body having an opening in a laser beam output position in the laser beam output surface. *

57. (Previously Presented) The magneto optic device of claim 1, further comprising a magnetoresistive sensor stacked on the semiconductor laser.

58. (Previously Presented) The magneto optic device of claim 1, further comprising a magneto optic head, the magneto optic head including a flying slider which holds the magneto optic device and flies in a predetermined direction relative to a recording medium over the recording medium, wherein the magneto optic device is incorporated in the magneto optic head.

59. (Previously Presented) The magneto optic device of claim 1, further comprising:

a shading body having an opening in a laser beam output position in the laser beam output surface, and

a magneto optic head, the magneto optic head including a flying slider which holds the magneto optic device and flies in a predetermined direction relative to a recording medium over the recording medium;

wherein the magneto optic device is incorporated in the magneto optic head.

60. (Previously Presented) The magneto optic device of claim 1, further comprising a magneto optic head, the magneto optic head including a transparent condensing medium having an incident surface on which the laser beam from the semiconductor laser is incident and a light-receiving surface on which the laser beam incident on the incident surface is condensed to thereby form a beam spot, wherein:

the thin film magnetic transducer is stacked on the light-receiving surface and has a coil wound around a core as a component of the magnetic circuit; and

the magneto optic device is incorporated in the magneto optic head.

61. (Previously Presented) The magneto optic device of claim 1, further comprising a magneto optic head, the magneto optic head including:

a transparent condensing medium having an incident surface on which the laser beam from the semiconductor laser is incident and a light-receiving surface on which the laser beam incident on the incident surface is condensed to thereby form a beam spot; and

a shading body having an opening smaller than the beam spot in a position in which the beam spot is formed in the light-receiving surface, wherein:

the thin film magnetic transducer is stacked on the light-receiving surface; and

the magneto optic device is incorporated in the magneto optic head.

62. (Previously Presented) The magneto optic device of claim 1, further comprising a magneto optic head, the magneto optic head including:

a magnetoresistive sensor stacked on the semiconductor laser; and

a flying slider which holds the magneto optic device and flies over a recording medium;

wherein the magneto optic device is incorporated in the magneto optic head.

63. (Previously Presented) The magneto optic device of claim 1, further comprising a magneto optic head, the magneto optic head including:

a shading body having an opening in a laser beam output position in the laser beam output surface;

a magnetoresistive sensor; and

a flying slider which holds the magneto optic device and flies over a recording medium in a predetermined direction relative to the recording medium;

wherein the magneto optic device is incorporated in the magneto optic head.

64. (Previously Presented) The magneto optic device of claim 1, further comprising a magnetic disk drive, the magnetic disk drive including:

a disk on which a recording medium is formed on the surface;

a flying slider which holds the magneto optic device and flies over the recording medium; and

a moving unit which moves the flying slider relative to the disk;

wherein the magneto optic device is incorporated in the magnetic disk drive.

65. (Previously Presented) The magneto optic device of claim 1, further comprising a magnetic disk drive, the magnetic disk drive including:

a transparent condensing medium including an incident surface on which the laser beam from the semiconductor laser is incident and a light-receiving surface on which the laser beam incident on the incident surface is condensed so as to form a beam spot;

a disk on which a recording medium is formed on the surface;

a flying slider which holds the magnetooptic device and flies over the recording medium; and

a moving unit which moves the flying slider relative to the disk;

wherein the magnetooptic device is incorporated in the magnetic disk drive, and the thin film magnetic transducer is stacked on the light-receiving surface.

66. (Previously Presented) A magnetooptic device according to Claim 1, wherein the magnetic gap is substantially parallel with the laser beam output surface to generate a magnetic field substantially parallel with the laser beam output surface.